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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kazuyuki Inoguchi

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EXAMINER

GUGLIOTTA, NICOLE T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,936	Applicant(s) INOUCHI ET AL.	
	Examiner NICOLE T. GUGLIOTTA	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 7, 9 - 28 is/are pending in the application.
- 4a) Of the above claim(s) 12 - 21 & 23 - 26 & 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 7, 9 - 11, 22 & 27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/12/2007, 12/27/2006, 9/28/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1 - 7, 9 -11, 22, 25 and 27) in the reply filed on January 14, 2008 is acknowledged.

Election of Species

2. This application contains claims directed to the following patentably distinct species: (1) an organic-composite containing fine particles (claims 1 - 7, 9 -11, 22, and 27) and (2) an organic-composite containing no fine particles (claim 25). The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species**, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

3. During a telephone conversation with Douglas Mueller (Registration # 30,300) on April 14, 2008 a provisional election was made without traverse to prosecute the invention of claims 1 - 7, 9 -11, 22, and 27. Affirmation of this election must be made by applicant in replying to this Office action. Claim 25 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

DETAILED ACTION

Specification

4. The disclosure is objected to because of the following informalities:
- a. The specification does not contain support for claim 6. The specification discloses the concentration of the hydrophilic organic polymer as follows:
 - i. 30 mass % or lower with respect to the SiO₂ or (5A – 15 Mass % or lower where A denotes the SiO₂ concentration, in terms of the SiO₂ concentration. Preferably, the concentration of the hydrophilic organic polymer is at least 0.1 mass%, particularly at least 5 mass% with respect to the SiO₂. (Page 12 of the specification, Lines 13 – 24)

- ii. The examples disclose 0.1 g of a 35% solution of organic polymer is added to the mixture. However, that does not mean there is 0.1% organic polymer in the total mixture. 35% of 0.1g is 0.035. Therefore, these examples disclose 0.035% of organic polymer in the 100g total mixture. This is not within the range disclosed by claim 6. Even if the Examiner were to accept 0.1 g of the 35% organic polymer solution in the total mixture as 0.1% organic material with respect to the total mixture, there is no support in the specification for the upper limit of 60% stated in claim 6.
- b. The disclosure does not specify what type of conductivity is intended. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 5 - 7, 9 - 11, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terauchi et al. (US 2003/0129421 A1).

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7. In regard to claim 1, Terauchi et al. disclose an antistatic composite coating containing organic-inorganic composite particles obtained by bonding a polymer having a (meth-)acryloyl group with inorganic oxide fine particles (typically silica sol) by way of an oxysilylalkylene sulfide bond (Section [0020]). Terauchi et al. further disclose a silane coupling agent having a highly polar functional group or a silane coupling agent having a bulky structure polar group. Kinds of the highly polar functional group or bulky functional group are not specially limited, but preferable examples include a polyalkene oxide group, a carboxylic acid (ester) group, a polycarboxylic acid (ester) group (Section [0034]). Highly polar groups are hydrophilic. Terauchi et al. disclose coating adhesion tests for the invention which resulted in no peeling, as well as Taber abrasion tests to determine abrasion resistance (Sections [0198], [0199], [0204], [0205], Examples 40 – 42, Sections [0209] - [0215]).

8. The Taber abrasion test is not a standard test for adhesiveness. However, it would have been obvious to one skilled in the art at the time the invention was made that a coating with excellent results from a standard adhesion test would not separate from the substrate after administering a Taber abrasion test.

9. In regard to claim 6, Terauchi et al. discloses 400g silane coupling agent (hydrophilic organic material) in a mixture with a total mass of 856.4g (Reference Example 18, Section [0172]). In this example, the hydrophilic organic material was 47 mass % of the total mass of the organic-inorganic composite film.

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10. In regard to claim 7, Terauchi et al. disclose in order to accelerate the hydrolysis and condensation reaction, an acid or an alkali, or other appropriate compounds may be used as a catalyst. An example of an acid catalyst includes phosphoric acid (Section [0072]).

11. In regard to claim 9, Terauchi et al. disclose kinds of the highly polar functional group or bulky functional group are not specially limited, but a preferable example includes a polyalkene oxide group (Section [0034]).

12. In regard to claim 10, Terauchi et al. disclose inorganic oxide fine particles. A primary particle size of a metal oxide is preferably from 1 to 100 nm. If the primary particle size is less than 1 nm, an effect of improving flaw resistance of hardness becomes low, and if the primary particle size is at least 100 nm, the particles tend to unpreferably cause secondary agglomeration and transparency tends to be lost (Section [0028]).

13. In regard to claims 5 and 11, Terauchi et al. disclose examples of their invention with a Taber abrasion test yielding a haze value of 0.4% (Examples 40 - 43). The above silica sol (inorganic fine particles) is preferably from 10 – 40% of silica having a particle size from 5 – 30 nm (Section [0084]).

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14. In regard to claim 27, Terauchi et al. disclose to impart antistatic properties an electroconductive layer, such as ITO (indium.tin composite oxide) layer may be added (Section [0012] and Section [0027]).

15. Claims 2 – 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terauchi et al., in view of Toshinori et al. (JP 2003 – 277537 A, Examiner has provided a machine translation).

16. Terauchi et al. is silent in regard to the thickness of the organic-inorganic composition coating used in the invention.

17. However, Toshinori et al. disclose an organic-inorganic composite film with a thickness of 1 - 3 μm (Section [0022]). Toshinori et al. disclose if the film becomes too thin, a gas barrier function will fall, and conversely, if the film becomes too thick, a crack will go into a film easily (Section [0018]).

18. It would have been obvious to one skilled in the art at the time the invention was made that the invention of Terauchi et al., which is made of similar materials as the invention of Toshinori et al., and which also has an abrasion haze of 0.4%, no peeling under an adhesion test, and fine particle silica sol should have a thickness of preferably 1 – 3 μm in order to avoid the film from cracking and prevent permeation of gases through the film.

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19. Claim 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Terauchi et al., in view of Kamitani (JP 2002-348542 A, Examiner has provided a machine translation).

20. Terauchi et al. disclose a plastic or resin substrate, but not a glass substrate.

21. Kamitani discloses an organic-inorganic composite membrane (film) comprising silica and a hydrophilic organic material, on the surface of a glass plate (Section [0002]).

22. It would have been obvious to one skilled in the art at the time the invention was made that an organic-inorganic composite film of Terauchi et al. has properties such as excellent hardness, transparency, conductivity, abrasion resistance, antistatic properties, which would be desirable and applicable to substrates which are also transparent, but do not have good antistatic properties or abrasion resistance, such as plastics and glass.

Double Patenting

23. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

24. Claims 1 – 3 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 4 of copending Application No. 10/594606. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both claim a film comprising silica as the main component, with the same film thicknesses and substrates.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE T. GUGLIOTTA whose telephone number is (571)270-1552. The examiner can normally be reached on M - Th 8:30 - 6 p.m., & every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NICOLE T. GUGLIOTTA
Examiner
Art Unit 1794

/Carol Chaney/
Supervisory Patent Examiner, Art Unit 1794